

07-18-00

A

PTO/SB/05 (11-90)

Docket Number (Optional)

PATENT APPLICATION TRANSMITTAL LETTER

To the Commissioner of Patents and Trademarks:

Transmitted herewith for filing is the patent application of DARRELL METCALFRESIDING AT: 905 N. OAK AVE, FILLMORE, CALIFORNIA 93023entitled ORDERING, SCHEDULING AND RESERVATION SYSTEM FOR
EXPEDITED COMMERCE BETWEEN INTERNET BROWSING APPARATUS
AND ONE OR MORE PHYSICAL VENUES

Enclosed are:

- ☒ FIVE sheets of drawings.
- ☐ an assignment of the invention to _____
- ☒ executed declaration of the inventors. (BATH)
- ☐ a certified copy of a _____ application.
- ☐ associate power of attorney.
- ☐ a verified statement to establish small entity status under 37 CFR 1.9 and 1.27.
- ☐ information disclosure statement
- ☐ preliminary amendment
- ☐ other: CERTIFICATE OF MAILING DATED JULY 17, 2000, 35 PAGE SPECIFICATION, CLAIMS AND ABSTRACT, POST CARD "RECEIPT OF CONTENTS"

CLAIMS AS FILED

	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE				345 ⁰⁰
TOTAL CLAIMS	- 20 =	* 19	x 9 ⁰⁰	171 ⁰⁰
INDEPENDENT CLAIMS	- 3 =	*	x	
MULTIPLE DEPENDENT CLAIM PRESENT			x	
* NUMBER EXTRA MUST BE ZERO OR LARGER			TOTAL	\$ 516 ⁰⁰
If applicant has small entity status under 37 CFR 1.9 and 1.27, then divide total fee by 2, and enter amount here.			SMALL ENTITY TOTAL	\$ 516 ⁰⁰

- ☒ A check in the amount of \$ 516⁰⁰ to cover the filing fee is enclosed.
- ☐ The Commissioner is hereby authorized to charge and credit Deposit Account No. _____ as described below. I have enclosed a duplicate copy of this sheet.
- ☐ Charge the amount of \$ _____ as filing fee.
- ☐ Credit any overpayment.
- ☐ Charge any additional filing fees required under 37 CFR 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 CFR 1.18 at the mailing of the Notice of Allowance, pursuant to 37 CFR 1.311(b).

JULY 17, 2000
Date

Darrell Metcalf
Signature

VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR

Docket Number (Optional)

Applicant or Patentee: DARRELL METCALF

Serial or Patent No.: _____

Filed or Issued: _____

Title: ORDERING, SCHEDULING AND RESERVATION SYSTEM FOR
EXPEDITED COMMERCE BETWEEN AN INTERNET BROWSING
APPARATUS AND ONE OR MORE PHYSICAL VENUES

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.
☐ the application identified above.
☐ the patent identified above.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.
☐ Each such person, concern or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

DARRELL METCALF
NAME OF INVENTOR
Darrell Metcalf
Signature of inventor
JULY 17, 2000
Date

NAME OF INVENTOR

Signature of inventor

Date

NAME OF INVENTOR

Signature of inventor

Date

1 ORDERING, SCHEDULING AND RESERVATION SYSTEM
2 FOR EXPEDITED COMMERCE BETWEEN AN INTERNET BROWSING APPARATUS
3 AND ONE OR MORE PHYSICAL VENUES
4

5 CROSS REFERENCE TO RELATED APPLICATION
6

7 The present non-provisional application relies substantially on disclosure within provisional
8 application Serial No. 60/144,210 filed July 19, 1999.
9

10 BACKGROUND OF THE INVENTION
11

12 Field of the Invention
13

14 This invention is related to the field of network-facilitated commerce systems, and in
15 particular to a system and method for expediting commerce with internet browsing apparatus and
16 ordering, reserving and scheduling networked-computer systems to achieve a dual-commerce
17 system and method between a large-scale network and one or more physical venues offering
18 merchandise, services and/or activities. The system communicates via a network such as the
19 international global network (Internet) to coordinate and automate and consolidate online
20 transactions, or interactions, and to schedule and/or sequence reserveable excursions to expedite
21 transactions, or interactions, at any in a variety of venues, including those providing multiple
22 points of interest, or multiple customer transactions, or interactions. The invention further
23 pertains to venues having scalable designated 'Expedited Service Areas' at, or near to, their
24 locations to provide scheduled transaction, or interaction, services to attendees who have--prior
25 to their arrival at the venue-location--employed the system to order, schedule or reserve one or
26 more venue deliverables, such as goods, services, and/or activities. In one embodiment of the
27 invention, the browsing apparatus includes a handheld device having wireless communications
28 capability for further enhancing attendee or customer interaction, convenience and the expediting
29 of their schedulable visits to venues and their points of interest. The system also optimizes
30 attendee or customer flow rates such that venue staffing can be optimally and respectively
31 scheduled according to the degree of scheduled attendee or customer traffic at each venue.

SUMMARY OF THE INVENTION

In recent years developers of mall-based facilities and store chains have been faced with numerous challenges relating to the need to improve the customers' experience when shopping at such facilities. Often such experiences are quite frustrating, for example, due to congestion, parking difficulties, or finding out upon arriving at a venue that items are out of stock or aren't available in desired sizes, or that services or activities thought to be available before one's arrival are in fact not available when one arrives at a given venue. From a business owner perspective, other problems are prevalent. Various venues including, mall-based facilities and facilities incorporating a plurality of stores, or store-chains, have little or no means to optimize a traffic flow of customers and are often left with having to make a best-guess estimate of the number of staff personnel that will be required in a store for a given time of the week, month, or season of the year. Thus, such stores can often become either understaffed resulting in long lines and unproductive delays for their customers, or can be overstaffed which can significantly effect the profits of the business. It therefore, would be preferable to plan and build networked-venues having the means to substantially improve the customers' and merchants' experience, to provide expedited and schedulable customer interactions at a variety of venues such as those located within malls, entertainment complexes, or other facilities offering products, services and/or activities. And to optionally do so in engaging and entertaining ways. Furthermore, it would be preferable to business owners to have some means for optimizing staffing according to a schedulable flow of expedited customer interactions within their respective stores, service centers, or other venues.

The present invention is illustrated in the context of physical venue commerce which is facilitated and expedited by a networked communication with browsing apparatus to achieve a dual-commerce system and method. The browsing apparatus communicates via a networkable connection means such as a networked connection offered by an Internet Service Provider (ISP) and employs a web-browsing software program such as Microsoft® Internet Explorer®, or Netscape Navigator®. The system provides an online software user interface such as a Web Portal (or downloadable web browsing application or interface) which communicates with network-formatted information pertaining to the availability and purchasing details of deliverables offered at one or more networked-venues. Such information is stored in computer-

1 accessible storage means to provide customer-access to current databased data pertaining to
2 product-related transactions, and current databased activity(s) and/or service(s) availability data
3 for available activity(s) and/or service(s) transactions. The system's browsing apparatus, includes
4 any in a variety of devices that are made for network browsing, including: computers; handheld
5 personal information devices; cell phones and/or pagers; and the like. When connected to the
6 system, the browser apparatus provides selection, ordering, and/or reservation of deliverables
7 such as products, services and/or activities offered at one or more participating venues networked
8 to the system. Such networked-venues can include any in a variety of product, activity(s) and/or
9 service(s) venues such as those found at entertainment complexes, mall-based facilities,
10 amusement parks, convention centers, stadiums, arenas, a store, or store-chain, service(s) or
11 activity(s) facility, and the like. The system's browsing apparatus connects with an online
12 software user interface which communicates with at least one networked-computer at each
13 participating networked-venue. The venue's networked computer(s) and software which
14 facilitate the selection, ordering, reserving and transaction confirmation of that venue's available
15 deliverables. Online ordering of the venue's deliverables are confirmed and recorded during
16 each customer transaction and the record-keeping data pertaining to selected and reserved
17 deliverables are updated real-time by the software, e.g. instantly adjusting the system's databased
18 inventory record in the case of purchased merchandise; or, instantly adjusting service(s)
19 availability or activity(s) availability during either of such transactions. A scalable designated
20 area, for example a "Expedited Service Area" is provided at each networked-venue's location for
21 expediting and culminating interactions customers' have reserved online. The system's software
22 includes a reservation and scheduling means that query an updateable chronological software
23 table of scheduled and available customer-events at networked-venues to reserve, schedule and
24 sequence itineraries for customers whose transactions or interactions are to occur at one or more
25 locations, or places. The reservation and scheduling means includes the means to create and
26 adjust itineraries (whenever possible) around a customer's preferred schedule, or when a
27 preferred schedule is not available, to provide schedules around a choice of one or more 'best-
28 fit' (i.e. best available) itineraries. After completing and confirming one or more order online
29 that will be culminated at one or more networked-venue, the customer then selects the best
30 available itinerary and the system's software provides the customer the choice to either
31 download the itinerary, for example to be used in a wireless handheld device, or print out an

1 itinerary record (by downloading it and printing it, or by printing it out from the Internet browser
2 software). The schedulable itineraries provide highly convenient excursions which eliminate
3 shopping frustrations due to congestion, parking difficulties (parking is schedulable), or finding
4 out upon arriving at a venue that items are out of stock or aren't available in desired sizes, or that
5 services or activities thought to be available before one's arrival are in fact not available when
6 one arrives at a given venue.

7 Additionally, one or more facility having the system's network-enabled venues can also
8 be equipped with customer interfacing means suitable for establishing a bi-directional
9 communications link to thereby confirm customer identification (I.D.) so that further transactions
10 or changes to scheduled sequenced steps can be made at such locations. Such interfacing means
11 can include any one or more in a variety of known or commercially available input, or
12 input/output (I/O) devices such as: an ATM-style interface; kiosk interface; or, other interface
13 with one or more of the following input and/or output devices: a magnetic card-strip reader, or
14 financial transaction card reader (e.g. for reading financial transaction card information, or credit
15 card and/or membership card information); electronic-signature pad; a computer-interfaced
16 keyboard, a computer-interfaced keypad, a PIN entry keypad, or wireless device transmission
17 interface suitable for Infrared (IR) I/O, or other type of radio wave I/O (e.g. 'Blue Tooth'), and
18 the like. With the employment of any one or more in a variety of customer interface means, the
19 identified customer can further edit, add to, amend or reschedule itineraries. Thus a highly
20 efficient reservation and scheduling system is provided which allows customers to conveniently
21 move from networked-venue to networked-venue; from one point of interest to another; from
22 one location to another; or, one place to another. For example, upon arriving at a facility
23 equipped with the system and method of the present invention, customer itineraries (whether
24 printed out, or downloaded into mobile handheld devices) can direct identified customers to a
25 reserved parking spot and then to each scheduled interaction/activity and/or service. The
26 customer is guaranteed online-reserved and confirmed orders for products, services and/or
27 activities upon confirming their desired order and best-available itinerary, and is given the option
28 when possible to also order deliverables online for home delivery. In the latter case, the customer
29 is provided a means through the software of the system to shop, or order, from online
30 representations of the deliverables of participating networked-venues, and to consolidate a
31 plurality of such online orders from different participating venues into a one-time order

1 procedure. It is the current practice of eCommerce sites on the Internet to require a separate
2 'checkout' procedure for the shopping or ordering of deliverables in different categories, for
3 example a book purchase from an eCommerce book seller website requires a separate checkout
4 (ordering) procedure from the purchase of flowers from a separate online florist's website. By
5 contrast, the present invention facilitates diverse deliverables ordering from separate-but-
6 participating online-represented venues and consolidates the plurality of orders into expedited
7 one-time order procedures. For example, a book, a DVD, and a dress, each sold by (and shown
8 as available) by different online sellers is consolidated into a single online invoice or receipt
9 indicating the separate price of each deliverable and the cumulative price (and where applicable
10 the sales tax). The system's software automatically places the order with each seller (and
11 optionally notifies their supplier of the sale) and deducts those deliverables from the available
12 inventory. The software tracks the scheduled customer flow-rate at any participating venue and
13 provides an optimum / known flow of customers from which each participating venue can more
14 accurately predict and schedule required personnel. Thus, any expedited service area can be
15 scheduled up to 100% capacity. The Expedited Service Area designated in any given venue is
16 also optionally scalable to allow more customer transactions and/or interactions as more
17 customers use the system's dual-commerce services to plan and schedule their network-enabled
18 excursions. Such scalability provides a means for venues to operate at an optimum and known
19 (scheduled) customer flow rate without the log-jamming experienced by customers at typical
20 venues that are operated at full, or near to full, capacity.

21 Customers experience the benefits of guaranteed availability of deliverables whether
22 purchased online and consolidated into a single-entry ordering procedure (which is then
23 delivered to their homes or places of work), or when ordered and retrieved in highly convenient,
24 schedulable excursions from Expedited Service Areas. Merchants experience optimized
25 customer flow and flow rates to networked-venues and more predictable staffing needs.
26 Merchants are also sent new and repeat customers and know in advance who, when and how
27 many customers are being sent. Many of these customers who might otherwise not have come to
28 a conventional physical venue--and perhaps simply shopped online at a potential low-priced
29 competitor's website--are attracted by a new customer experience offering unprecedented
30 efficiency and time-saving convenience. Merchant's suppliers are optionally notified
31 automatically by the system's software as to the merchants' restocking needs (e.g. by a

1 networked order to a suppliers computer, by email, by fax, or by automated phone message,
2 etc.).

3 It is the purpose of the present invention to address the shortcomings in existing and
4 prevalent web-only commerce sites, and physical venue-only commerce, and to overcome the
5 frustrations associated with, and experienced by, non-scheduled visitations of customers, or
6 attendees, and to instead provide an efficient networked ordering, reservation and scheduling
7 system for dual-commerce offering distinctive online, and physical venue customer and
8 merchant experiences.

10 PRIOR ART

12 Several attempts have been made to provide improved customer interactions in retail
13 environments and other physical venues, but the attempts have not been implemented in ways
14 which were well coordinated for the customer(s) or the business owner(s), or in ways that used
15 the power of an online network to order, reserve and schedule both online and physical venue
16 transactions and/or interactions. The present invention consolidates ordering procedures and
17 schedules optimal traffic flow when more than one facility, venue, or location of interest needs to
18 be visited. By contrast, the previous methods have not implemented scheduling methods in a way
19 that benefited both the store owner and the customer travelling between multiple venues.
20 Additionally, they have not provided printable, or downloadable itineraries, or provided
21 scheduling flexibility to amend, add to, or otherwise edit schedulable itineraries, transactions
22 and/or interactions; or to download such schedules to convenient handheld devices which have
23 various means for connectivity to a scheduling system.

24 From a customer perspective it has been possible to call by phone, ahead of time to
25 arrange that a product, activity or service be reserved for pick up at a certain time. However, the
26 customer has either done this ordering from memory, or from a static printed reference such as
27 an ad or catalog, or from a very limited understanding of a facilities' entire offerings. Whereas,
28 with the dual-commerce system and methods of the present invention it is possible for a
29 customer to browse entire databased inventory(s) representing all available products, or all
30 available services and/or activities, and to access such deliverables at one or a plurality of
31 networked-venues, and to then schedule efficient sequenced visits (including the scheduling of

reserved parking). Thus highly organized and efficient excursions to one or more venue, place of interest, mall, or complex, and the like, is easily provided, and the inherent strengths of the Internet (or other network) to track and provide transaction accountability is employed by the dual-commerce system. Additionally, the coordinated scheduling makes it possible for store owners to enjoy network-enabled sales that send customer to the merchant's venue and to benefit from the knowledge of when such customers will arrive so that efficient staffing of the venues' personnel can also be achieved. Search of prior art has shown no systems, methods or apparatus to achieve such objects and advantages of the present invention, or its dual-commerce, order consolidating and scheduling/reservation methods including the system's capability to query an updateable software table of chronological scheduled and schedulable customer-events in order to schedule 'best-fit, or best available, downloadable itineraries for time-saving excursions to one or more networked-venues.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1A is a diagrammatical flow chart showing various browsing devices that can be linked in bi-directional communication with: a network connection means such as an Internet Service Provider (ISP); a user interface such as a browser software application e.g. Microsoft® Internet Explorer® or Netscape Navigator®; an identification means; and, a browsing/interface means such as Internet Portal, all of which provide access to at least one networked-venue.

Figure 1B is a continuation of the flow chart of Fig. 1A, whereby the browsing apparatus of Fig. 1A has bi-directionally linked communication with at least one interface to one or more activities, services and/or merchandise venue(s) and venue-condition editing, monitoring and reporting means, and an ordering, reservation and scheduling means to facilitate online ordering, home delivery of online deliverables, and to provide scheduled itineraries for the culmination of customer transactions or interactions at one or more networked-venue(s).

Figure 1C is a continuation of the flow chart of Fig. 1B showing the sequence following the arrival of a customer having a printed itinerary, or alternatively a downloaded schedule in a

1 handheld device, and his or her "Expedited" interaction with a single facility, or a multi-venue
2 facility following customer identification and order confirmation.

3
4 Figures 2 and 3 are front views and top views respectively of an optimized networked-
5 venue having a plurality of networked workstations which securely encircle an inventory of
6 merchandise in a workstation system. Figure 3 shows an interior top view of the venue's
7 automated pick-and-place robotics and record-keeping/updateable system, which is accessible by
8 workstation access, including one or more optional ATM-Style stations at an exterior wall
9 adjacent near to the workstation system.

10 11 DESCRIPTION OF THE PREFERRED EMBODIMENTS

12
13 Figures 1A, 1B and 1C collectively represent a preferred embodiment of the present
14 invention as a dual-commerce system and method for ordering, scheduling and reservation of
15 one or more customer transactions or interactions, and should be referred to sequentially and
16 interchangeably to follow the descriptions below. In Fig. 1A various types of network browsing
17 apparatus such personal computer 100, handheld personal information device 102, and cellular
18 phone and/or pager 104 are represent one or more networkable browsing device 106 that can be
19 used to communicate with the system . The browsing devices have bi-directionally
20 communication linkage via a wireless communications protocol, or via cable connections, to
21 network connection means 108 such as an Internet Service Provider (ISP) or other provider of
22 high-speed bandwidth connection to the Internet. Each of the browsing devices provide
23 connection with a network such as the having an on-line protocol e.g. a transmission control
24 protocol/internet protocol (i.e. "TCP/IP") but can alternatively be configured to connect with a
25 variety of networks including LANs, WANs and the like. Network connection means 108
26 provides communication via a user interface 110 such as a web-browsing software program e.g.
27 Microsoft® Internet Explorer®, or Netscape Navigator®. The web-browser provides
28 communication with websites, Internet portals and the like via an identification verification
29 means 112 such as any one or more in a variety of known software means for I.D. verification
30 including user-entered passwords, keywords, user I.D. names, PIN numbers, and the like.
31 Following I.D. verification, a user is granted access to browsing/interface means 114 such as an

Internet portal or other Internet site which--continuing on to the flow chart in Fig. 1B--provides communication with one or more networked-venues via online representations of physical venues (i.e. venues having physical locations to receive and serve customers). Browsing interface means 114 provides communication with: interface to one or more activities venues or facilities 116; interface to one or more services venues or facilities 136; or, interface to one or more merchandise venues or facilities 142. Interfaces 116, 136 and 142 communicate respectively with activities venue-condition editing, monitoring and reporting means 118, services venue-condition editing, monitoring and reporting means 138, and merchandise venue-condition editing, monitoring and reporting means 144. Monitoring and reporting means 118, 138 and 144 are comprised of one or more databases whose data represent current venue conditions. For example, networked-venue conditions at activities venues or facilities include data pertaining to availability, ordering, scheduling and reservation of activities at any one or more in a variety of activity networked-venues such as one or more: restaurant(s) 120; recreation facilities 126 e.g. theme parks, entertainment complexes, malls, arcades, health clubs and the like; theatre(s) 132 e.g. film and/or stage; arena(s) 134 events and activities such as skating, sporting events and live shows, etc. Venue conditions at services venues or facilities include data pertaining to availability, ordering, scheduling and reservation of services at any one or more in a variety of service networked-venues 140 offering one or more schedulable services, for example: health care such as eye care, skin care, dental, acupuncture, general medical; or hair care, nail care, massage; or, travel and accommodation services such as flights, car rentals, recreational outings bookings and recreational vehicle rentals, hotel accommodations; or, training, tutoring, seminars, classes or other educational sessions, etc. Venue conditions at merchandise venues include data pertaining to the availability and ordering of merchandise, and the reservation and schedulable pickup of reserved merchandise or goods at any one or more in a variety of merchandise venues 146 offering goods for sale or rental: retail stores, store-chains, themed retail, department stores, entertainment-content stores, supermarkets, malls, strip malls, dealerships, membership clubs, concession stands, and the like.

The networked-venue conditions are stored, amended and maintained as databased data in the venue-condition editing, monitoring and reporting means (118, 138, 144) and are accessible by, and communicate with, at least one venue-type interface to provide stored and regularly-updated data pertaining to the availability, ordering, reservation and/or scheduling of

1 online and physical venue deliverables. Such data is represented in the interface in a current
2 databased selection from which customer choosing and ordering is facilitated--by any one or
3 more in a variety of known online order-taking procedures. An ordering, reservation and
4 scheduling means 154 records and stores customer-choices using transaction/interaction record-
5 keeping & updating software 122. Means 154 also comprises one or more networked-computer
6 having software routines for facilitating online ordering, and delivery, and for facilitating online
7 orders that are subsequently culminated at one or more networked-venue(s)--following the
8 scheduled arrival of the ordering customer and the verification of their identity at the physical
9 location of the each of the networked-venue(s) offering the desired transaction(s) or
10 interaction(s).

11 For example, in one scenario a customer's identity is verified online and he makes
12 several orders from a plurality of online-represented networked-venues: flowers from one store;
13 a dress from a second store; an audio CD and DVD from a third store; a meal from a restaurant;
14 and, theatre tickets to a movie. For the flowers, dress and entertainment media,
15 merchandise/venue-condition editing, monitoring and reporting means 144 is accessed via
16 merchandise interface 142 and provides a current databased selection of merchandise that is
17 easily browsed through--being categorized by type and name of the merchandise networked-
18 venue, and by type of product(s), product(s) parameters that typically affect buying decisions
19 (such as prices, taxes, sizes, dimensions, colors, product age/year); product(s) currently
20 available, and so forth. For the meal and theatre tickets, activities/venue-condition editing,
21 monitoring and reporting means 118 is accessed via activities interface 116. For one or more
22 services, services/venue-condition editing, monitoring and reporting means 138 is accessed via
23 services/browser interface 136. Online deliverables and venue-based deliverables are represented
24 by any one or more in a variety of known online and/or downloadable media such as: text, line
25 art, graphical depictions, photos, digital video files, digital audio files, computer-storable files,
26 faxes, email, instant messaging, and the like.

27 As a plurality of selections are completed, ordering data is sent to at least one ordering,
28 reservation and scheduling means 154 which includes software routines for querying,
29 maintaining and editing a chronological table of customer-events: scheduled and schedulable
30 148. Ordering, reservation and scheduling means 154 keep a running and editable tally of each
31 customer-order. For a plurality of online orders derived from different online-represented

1 networked-venues--i.e. orders for deliverables that will be sent for example, to a customers home
2 or place of business--a running tally of all orders is consolidated by one or more software
3 routines of means 154 into a single order-entry procedure (versus separate orders for each online-
4 represented venue) and the consolidated online order is culminated and recorded when confirmed
5 by the customer. Ordering, reservation and scheduling means 154 retains a record of each venue
6 providing the deliverable(s) in the consolidated order and automatically calculates and allocates
7 revenues to the merchants providing the online orders. The system also keeps a running tally and
8 implements a similar record-keeping procedure for the online ordering of online-represented
9 deliverables that are subsequently obtained from networked-venues. When shopping online for
10 deliverables available at networked-venues, the customer selects an appropriate interface (116,
11 136, 142) and venue-type from which to make one or more order. Thus, diverse dual-commerce
12 ordering is facilitated: at the online-represented flower shop (networked-venue) the customer
13 orders two dozen roses; at the online-represented dress store a size 8 mango-colored of a specific
14 manufacturer is selected; at online-represented entertainment-content venue the CD and DVD
15 are easily selected--being logically categorized by media headings typically found in
16 entertainment-content stores (including "Hits", "Specials" alphabetized "Artists", music and film
17 genres, and so forth); the online-represented restaurant displays menu items from which a meal is
18 selected and ordered; the theatre displays its current schedule of available tickets to feature films
19 and a movie is selected and ordered.

20 The dual-commerce system optionally provides software routines that provide previews
21 of streaming entertainment-content such as streaming audio, or streaming video.

22 After choosing such deliverables from the online-represented networked-venues (in this
23 example products and activities), the ordering, reservation and scheduling means 154 queries
24 chronological table 148 to determine one or more best-fit schedules available for time-saving
25 excursions to the expedited service areas offered in each networked-venue. Optionally, means
26 154 can also query the customer for preferred time-windows during which he may wish to arrive
27 and remain at one or more networked-venues. In the present example, the customer chooses late
28 Friday or Saturday afternoon with the meal to begin approximately at 6:30 PM and the movie as
29 soon thereafter as possible (Saturday is his specified preference). Means 154 contrasts the
30 customers preferred schedule(s) against the table of currently scheduled and available customer-
31 events and provides a best-fit choice of available itineraries based on the most efficient and most

1 convenient sequencing of the chosen customer-events (e.g. sequencing those events in a schedule
2 requiring the least amount of the customer's time). Using the 6:30 meal time, the ordering,
3 reservation and scheduling means 154 queries table 148 and finds a 6:15 time slot available on
4 Saturday. Means 154 quickly scans the availability at other venues and proposes the following
5 itinerary: the flower and dress shops are nearest one another so they are scheduled for customer
6 expedited service in a time-window between 6:00-6:15; the entertainment-content store and
7 theatre are next to the restaurant so the CD/DVD pick-up time-window is 7:00-7:15 with the film
8 starting at 7:15 PM. So in less than an hour and fifteen minutes, the customer can eat a meal,
9 'shop' at three stores and begin watching his choice of a movie. If schedules seem too tight for
10 comfort, the customer can request the system to expand the schedule duration, e.g. the one
11 fifteen minute schedule can be expanded (as available) to 2 hours.

12 Thus a plurality of online orders can be consolidated by the system into a single online
13 entry-form (and deliverables are then sent for example, to a customer's home or business), and a
14 plurality of orders retrievable from networked-venues is consolidated by the system into a single
15 itinerary which facilitates the culmination of the orders at the venues. The applicant of the
16 present invention calls these dual-commerce advantages and benefits "Web Assisted Retail
17 Purchasing™" and uses the acronym WARP™ to explain how customers can now experience
18 WARP-Accelerated shopping.

19 As mentioned, the customer chooses and confirms his itinerary and selects a printout record 158
20 or downloadable itinerary 156 which can be downloaded to a computer for subsequent printing or
21 downloaded to a portable apparatus such as a commercially available handheld wireless device. It is
22 noted that although the present example illustrates the sequencing of customer-events that will be
23 culminated at a plurality of chosen networked-venues, it is also possible to simply schedule and reserve
24 a customer transaction and/or interaction at a single networked-venue. For example, in Fig. 1C a printed
25 itinerary or downloaded schedule 160 can direct the customer to a single facility 162, or in the case of
26 the example given above, to a multi-venue facility 164. In either case, a customer identification and
27 order confirmation means 166--such as any one or more in a variety of known identification and order
28 confirmation apparatus (including wireless bi-directionally linked confirmations, electronic signatures,
29 the combination of financial transaction cards and card magnetic strip readers, and so forth)--precedes
30 scheduled parking 168 (optional) and his transaction and/or interaction at a designated expedited service
31 area 170. Such designated areas are within, adjacent to, or near to, the networked-venues. The

1 designated expedited areas are so marked and are easily discernable to the customer, and are staffed by
2 personnel according to the flow of 'expedited' customer interactions that have been scheduled before the
3 customer's arrival.

4 Each culminated order is automatically reported back--via one or more order-reporting
5 software routines--to the relevant venue-condition editing, monitoring and reporting means
6 (118, 138, 144) via reporting step 176. Additional transactions and/or interactions 172 (by the
7 same customer) at other networked-venues are handled by one or more software routines which
8 tracks, records and tallies subsequent use of customer identification and order confirmation
9 means 166 and/or subsequent transaction and/or interaction at respective designated expedited
10 service area 170 of such networked-venues. When the customer is done 174, the cumulative
11 transactions and/or interactions are reported to one or more venue-condition editing, monitoring
12 and reporting means (118, 138, 144) via reporting step 176. The report is also routed to ordering,
13 reservation and scheduling means 154 to adjust the availability of schedules in chronological
14 table 148 and transaction/interaction record 122 which additionally calculates, records and
15 reports revenues and/or commissions for each transaction/interaction and does so according to
16 the types of purchases made. Customer orders, reservations and schedules (and relevant data
17 pertaining thereto) are also communicated to merchants via merchant access 124 as orders are
18 made and confirmed. Optionally merchants can choose to have one or more suppliers
19 automatically notified of each sale, or when merchant-configurable restocking thresholds are
20 reached.

21 In one embodiment of the invention, the system can optionally accommodate real-time
22 requests for itinerary breaks when the customer is using, or about to use, an itinerary. For
23 example, customers may wish to rest or take an unscheduled detour. In such cases, ordering,
24 reservation and scheduling means 154 queries and adjusts schedules as available in chronological
25 table 148 and reports schedule options to the customer for his or her choosing via a customer's
26 portable communications device such as wireless personal digital assistant ('PDA'), or via a
27 venue-based itinerary-displaying and/or printing system (e.g. one or more networked computer
28 and coupled printer, not shown). In larger venues such as amusement parks, or theme parks,
29 means 154 simply swaps break requests between a plurality of customers and re-schedules
30 customer-events as available. For example, in the following scenario, it's 11:20 AM, 'customer
31 A' has two events scheduled between 11:30 AM and noon but has just made a half hour break

1 request at a networked-venue computer, and 'customer B'--who has a half hour break scheduled
2 between 11:30 AM and noon and the same two events as 'customer A' scheduled a half hour
3 later (noon to 12:30 PM)--now wishes to prioritize the scheduled events *before* his break and he
4 uses the Internet connectivity of his wireless device to make his request. The system easily
5 accommodates both customers wishes by buffering all pending requests while querying changes
6 and current conditions in chronological table 148. One or more software routines compare the
7 scheduled data and requested changes and--in the example of 'customer A' and 'customer B'
8 instantly swaps those customers requested breaks with their previously scheduled events.

9 Thus a highly efficient, flexible dual-commerce system offering both conventional online
10 ordering and delivery 152 and the improved convenience of schedulable itineraries to one or
11 more networked-venue(s) is provided. The merchants of the networked-venues receive
12 customers that the system sends them--customers who might otherwise have simply shopped
13 online if not for the new customer experiences being offered, including added-value time-saving
14 convenience and same-day availability of deliverables at networked-venues. No waiting in long
15 lines or wondering if desired goods, activities or services, will be available (including in the right
16 size, model, shape, color, etc.). The system ensures availability of, and reserves, the customers'
17 transactions and/or interactions at all participating networked-venues. The customer passes
18 quickly from expedited service area to expedited service area using a minimum of time, and
19 schedule changes are easily accommodated. The system also creates a seamless economy
20 whereby customers and merchants receive current online and venue-condition status,
21 commissions are automatically calculated for all orders and, optionally suppliers are
22 automatically informed as to the restocking needs of networked-venues. Furthermore, the
23 customer can pre-pay all orders online, meaning that little or no cash need be carried by the
24 customer to networked-venues, which is an added security benefit.

25 In another embodiment of the present invention, the designated area for expedited service
26 includes the incorporation of any one or more in a variety of known receivers or transceivers of
27 wireless transmissions suitable for communications with the type of wireless devices mentioned
28 above. Expedited service areas can also include magnetic card strip readers for customer
29 identification and order confirmation purposes. In either case, the facility's wireless devices or
30 transceivers, or card readers, are employable as an efficient and quick verification means of the
31 expedited-customer's identification, order information, price confirmation, and other expedited

1 service advantages. Additionally, handheld devices having screens that are easily readable, can
2 optionally be equipped with machine readable code that is suitable for downloading and
3 displaying scheduled itinerary information which is received from the Internet, or from wireless
4 transceivers (or received when temporarily coupled to a computer). For example, the customer's
5 sequenced itinerary can be displayed as a running or real-time updateable schedule on the screen
6 display of his or her device and can include automated, or user-configurable prompts that occur
7 minutes ahead of any given event. For instance, "Dinner in ten minutes", "CD pickup available
8 in 20 minutes", "The film starts in 45 minutes", and so on.

9 Bi-directional interactions of wireless devices facilitate quick 'checking in' at a each
10 venue and can include software to automatically update display-screen data and check-off and/or
11 hide listed events when orders or events are completed, and/or provide useful information as to
12 the next stop on one's itinerary. For example, the screen may read "Your next stop is on level
13 two on the opposite side of the mall, you're currently here on level one", "Your car is parked in
14 section B3, to exit, go to the opposite end of the mall and proceed down the escalator one level".
15 Handheld devices equipped with a graphical user interface ('GUI') and schedule-displaying
16 software can graphically or pictorially represent such instructions in virtually any type of facility
17 including: a mall, entertainment complex, amusement park, convention hall, stadium, arena, and
18 the like, using photographs, diagrams, maps, or other graphical depictions and can direct its user
19 with graphical elements such as arrows to indicate which way he or she should proceed relative
20 to their current position, and relative to their desired destinations in their expedited excursion
21 (itinerary).

22 In the event that the handheld device also includes, or optionally provides, direction-
23 finding hardware and software, for example 3-Com's PalmPilot® can be equipped with a Global
24 Positioning System (attachable accessory), the device can be equipped with software for
25 displaying destinations relative to the current location of the customer and show the customer--
26 for example with a directional arrow relative to a graphically depicted map--which way to go
27 relative to their current position and one or more destination in their scheduled itinerary.

28 Some handheld devices also include audio capability, in which case directions by audio-
29 equipped devices can be given audibly, as can current schedule information, which would be
30 very useful for the visually impaired. It is noted that such navigating features would be
31 particularly helpful in large area venues or complexes, including amusement parks, stadiums,

1 arenas, fairs, or large conventions, and the like, where becoming geographically disoriented can
2 easily occur. Thus one's movement from one place to another (a facility, an attraction, a booth,
3 the aisles of a market or store, and so on) can be logically and efficiently sequenced by the
4 apparatus of the present invention. Additionally, navigation with a graphical user interface
5 assisted by a GPS further expedites one's sequenced excursion while optionally providing timing
6 information as to estimated travel-time, walking or waiting time, relative to a particular point of
7 interest, facility, attraction, booth, and the like.

8 Other benefits are achieved with the aforementioned GUI and/or audio capable devices
9 such as employing graphical and/or audio messaging that is instructive and/or entertaining and
10 engaging. As the speed, LCD displays and memory capabilities of such devices improve, it will
11 be practical to add audio and/or video clips (whether resident in the unit, downloaded therein, or
12 played as 'streaming' files--as communications bandwidth permits), including the use of famous
13 clips and quotes from multimedia sources such as film libraries, cartoon libraries, or audio
14 recordings, any of which can be chosen by the user according to the user's tastes and are
15 selectable by the user from a database of various themes, personalities, actors, comedians,
16 musicians, performers, athletes, leaders, politicians, and other famous figures. Such clips and/or
17 recordings are also employable (through the employment of software routines) in a manner that
18 makes sense in the context of, and is synchronous with, the customers' transactions, interactions
19 and scheduled itinerary--and can also include entertaining media and recordings (whether related
20 to their transactions or not) that can be played back on their handheld device. For example, a
21 comedic clip might say "I'm trying to think but nothing happens" as a user is waiting for access
22 to a particular piece of information.

23 Figures 2 and 3 are front views and top views respectively of an optimized networked-
24 venue having a plurality of networked workstations which securely encircle an inventory of
25 merchandise as a workstation system. Figure 3 shows an interior top view of the venue's
26 automated pick-and-place robotics and record-keeping/updateable system, which is accessible
27 on-line and by workstation access, including one or more optional ATM-Style stations at an
28 exterior wall adjacent near to the workstation system.

29 By way of example, Figures 2 and 3 depict an embodiment of the invention which is
30 further comprised of a networked-venue workstation system 12 representing an optimized
31 networked-venue. Workstation system 12 has a plurality of workstations 26 that serve as

1 customer ordering bays from which in-store products can be ordered and automatically retrieved.
2 As seen in Fig. 3 a plurality of networked workstations 26 are arranged to encompass and secure
3 an inventory of merchandise 16 within workstation system 12 such that the inventory is out of
4 reach to customers until purchased--thus eliminating the need and costs for individual
5 entertainment-content security apparatus and store-wide tag detection electronic security
6 systems. The workstations are each comprised of a networked computer/graphical user interface
7 and display 48, with each computer thereof providing connectivity to the Internet and to a
8 customer I.D. and ordering confirmation means 64 including transaction and interaction software
9 routines of the types previously described in reference to Fig. 1B. Whether employed in a mall-
10 based facility, or a an independent store-chain facility, workstation system 12 is optimized for
11 automated record updating of inventory and order information, providing both remote networked
12 access and local access (e.g. in-store) via a networked interface to one or more merchandise
13 venues 142 employing the methods previously described in reference to Fig. 1B.

14 The workstation system is further comprised of one or more designated areas 24 (Fig. 3)
15 such as an 'Expedited Service Area' for expedited customer interactions, and optionally includes
16 the location of one or more ATM-Style bays 28 located adjacent to an external wall of the
17 facility--including one or more of the external bays also having an expedited transaction
18 designated area 24. The bays have cable coupling, or wireless communication with, at least one
19 networked computer 14 having venue-condition editing, monitoring and reporting means 144 of
20 the type previously described in reference to Fig. 1B. The customer identification and order
21 verification means 64 of the workstation/ordering-bays can also be configured to provide
22 wireless transceivers and/or financial card strip readers to expedite transactions. Optionally
23 entertaining and engaging audio and/or visual clips that help facilitate user interaction can also
24 be employed. Like the multimedia clips and recordings employed by the handheld devices,
25 multimedia use at the workstations can also expedite and improve the user's shopping
26 experience--such that entertaining clips make sense in the context of the user's transactions and
27 are entertaining, and optionally configurable to the user's taste. Thus, the workstation interface
28 can appear to be talking to and/or instructing the customer by employing a contextual sequencing
29 of appropriate clips or recordings relating to their current interactions and relative to their
30 transactions. Additionally, the user can be provided with a diverse library of multimedia files to
31 pre-select desirable personalities (e.g. famous, notorious, dysfunctional, comedic etc.), themes,

1 scenes, songs, song clips, and so forth, and can be selected when the system is accessed
2 remotely, or while being operated from an ordering-bay. It is noted that although the emphasis in
3 the previous description has been on commerce and in particular dual-commerce as it pertains to
4 workstations in a designated expedited service area, it is also noted that workstations in non-
5 designated areas provide similar functionality and are of service to regular walk-in customers.

6 The external ATM-Style bays 28, provide up to 24 hour per day automated transactions
7 for example, when used in conjunction with the pick-and-place robotics of the workstation
8 system 12 (as depicted in FIG. 3) bays 28 can be used to retrieve purchases or rentals, and for the
9 return and re-stocking of the latter, around the clock.

10 Figure 2 is a front view of the workstation system 12, the workstations 26 are accessible
11 via a ramp 46 leading to an elevated walkway 36 having a handrail 44 extending upward from an
12 outer perimeter of the walkway. Each workstation has a networked computer/graphical user
13 interface and display 48 providing a user interface to facilitate a selection, ordering and/or
14 retrieval of inventoried goods (16 of FIG. 3) secured within an inner diameter of the annular
15 structure 52 supporting the walkway and workstations. Each workstation is equipped with a
16 customer identification and order verification means 64 such as a wireless transceiver that can
17 communicate with a customer's handheld device, or a magnetic card strip reader. It is noted that
18 by inventorying the goods, such as audio CDs, DVDs, CD-Roms, Video Games, Videos and the
19 like, within the annular structure, that customers will not have access to any of the stock until it
20 is ordered and paid for. Thus shoplifting is eliminated as are the substantial security costs
21 associated with securing such valuable goods. For example, it is not uncommon for stores having
22 a significant volume of such media, to pay in excess of \$100-200K in security related equipment,
23 which provides no added-value to the consumer in terms of their shopping experience. Often
24 stores must also employ full-time security personnel thwart or discourage shoplifting--adding the
25 expense of their salaries to the security overhead. Furthermore, stores utilizing plastic CD
26 security-locks on media have to replace those locks every few years due to damage and scuffing,
27 and the process of removing the locks significantly slows down customer transactions. By
28 contrast, the methods employed in FIG.S 2 and 3 eliminates the security concern by securely
29 enclosing the inventory (out of sight) and uses the resource of security monies formerly required
30 to add enhancements to the customer-experience.

1 All available in-store inventory is clearly shown and easily browsed through on the
2 workstation display and selectable by customers at the workstation via one or more computer-
3 coupled or computer communicating input device (i.e. goods representation and ordering are
4 similar to product browsing and ordering functionality provided by eCommerce websites). When
5 the networked-venue is of a type that provides entertainment-content the dual-commerce system
6 optionally provides: software routines for streaming entertainment-content such as streaming
7 audio, or streaming video; and computer-accessible playback means for previews of other
8 digitally-recorded content (such as CDs, DVDs, and files stored in non-volatile memory and/or
9 hard disk-based devices). Such computer-automated browsing of current inventory eliminates the
10 hunting of product that may or may not be available down any number of aisles in a conventional
11 store. If stock is not available for on-screen ordering and immediate retrieval, the customer is
12 offered automatic delivery as soon as it is available.

13 An example of re-directing investment and constructively using the monies formerly
14 required for security and security overhead, is the employment of an immersive and dynamic 360
15 degree screen 40 which is positioned adjacent to the upper edge of the annular structure 52 such
16 that rear-projection images can be panoramically or segmentally projected onto the screens by a
17 ring of projectors 42 (seen in FIG. 3) including live images from remote locations and/or pre-
18 recorded images. The panoramic or segmented screen content is dynamic and engaging to
19 passersby and workstation customers and produced to heighten the customers experience.
20 Optionally, for increased security and/or enhanced customer engagement, workstation cameras
21 30 can be provided for interactive participation with other customers, including interactivity with
22 customers at similar facilities located elsewhere and the imaging of such interactions on the
23 screen 40.

24 Figure 3 is a top view showing an interior detail of the workstation system 12 depicted in
25 FIG. 2. Adjacent to an outer perimeter 54 ramp 46 can be seen at the leftmost portion of the
26 illustration which leads to a walkway 36 surrounded by handrail 44--both of which generally
27 encircle an annular structure 52 supporting workstations 26 (seen in FIG. 2). Adjacent to an
28 opposite segment of outer perimeter 54 is enclosed corridor 56 leading to external wall 32. Wall
29 32 has one or more ATM-Style ordering bay 28 which can also be equipped with a security
30 camera 30. Like the workstations 26, bays 28 are also interactive and provide access to the
31 robotic pick-and-place apparatus 18 and facilitate customer interaction and transactions 24 hours

1 per day, including purchases, rentals and rental returns. In an interior area 38 within the annular
2 structure 52 is a secured inventory of goods 16. The scale of the depicted workstation system is
3 such that the inventory is retained within approximately a thirty foot diameter making its storage
4 capacity about 40,000 CD-sized CD, DVDs, CD-ROMs, and the like. Each storable item is given
5 its own storage slot (not shown) having a position (height and radial position) that is assigned
6 during stocking and maintained by a workstation networked device 14 and
7 transaction/interaction record-keeping & updating software 122.

8 From the top view of FIG. 3 it can be seen that any one or more of the workstations 26 or
9 bays 28 can be clearly designated for expedited-customer interaction for example, by easily
10 readable workstation indicia, or coloring, etc., and that such areas can be scalable to include
11 more workstations in the designated area to accommodate increases in scheduled customers.
12 Additionally, if the area is designated by rope/stanchion boundary, such a perimeter is flexible
13 enough to expand and contract a designated area as needed according to an ebb and flow of
14 scheduled customers. Additionally, horizontal workstation pads 34 can be provided for other-
15 abled individuals' access to workstations, for example those arriving in a wheelchair.

16 At the end of robotic arm(s) 70 a pick-and-place means 18 is shown which is suitable for
17 placing goods in any one of a plurality location-specific merchandise slot 58 among an entire
18 inventory of goods. Similarly, pick-and-place means 18 is configured to retrieve goods from
19 location-specific slots 58 as needed. In either case, such placement or retrieval of goods is done
20 in communication with the record-keeping software and record-updateable data of networked
21 device 14, including the schedulable retrieval of goods according to the expedited-customer
22 transactions occurring at the designated areas (i.e. workstations) of the facility. In addition to
23 means 18 at the end of arm(s) 70, a light intensity sensing means 22 can also be employed,
24 whereby slots that are empty reflect back light to a system-coupled, and system-communicating
25 light emitter-detector pair that is measurably different from the light reflected by a filled slot. For
26 instance, the interior of any empty slot can be comprised of a surface that promotes a light-
27 reflectivity delta which is measurably different when contrasted against the light reflectivity of a
28 filled slot. For example the interior of the slots can be flat black; or have a light-reflecting
29 material such as light-reflective tape attached thereto which provides a brighter reflected light
30 signal back to sensing means 22 than a occupied slot does. Goods that are stocked, retrieved, or
31 re-stocked in a plurality of slot 58 are relationally databased according to slot height locations

1 and slot radial locations and can be cross-referenced by any one or more in a variety of
2 entertainment-content categories including: content title; content-genre; content-artist; content-
3 production company, and so forth (e.g. within the record-keeping software and record-updateable
4 data of the networked device 14).

5 In one embodiment of the optimized networked-venue, the goods can be substantially
6 standardized in size, for example, by stocking the standard-sized media of Audio CDs, DVDs,
7 CD-Roms, CD-Based Video Games, and so forth. In which case, the approximate 30 foot
8 diameter rack system within the annular structure 52 of networked-workstation system 12, would
9 contain about forty thousand units with the units stored in slot-racks approximately 8 feet high.
10 Substantially more units can be stored when a plurality of annularly-shaped (or other-shaped)
11 racks are employed. For example, one or more racks can be placed in an area interior to the
12 diameter of annular structure 52 (e.g. with additional annular-shaped racks having a diameter
13 that is less than thirty feet).

14 The robotic pick-and-place means 18 located at the ends of arm(s) 70 are radially and
15 vertically positionable to any merchandise-slot 58: 1.) they are radially positionable in a
16 horizontal axis for example by the motion-control rotation of arm 70 to desired radial slot
17 positions relative to a pre-determined 'home' position; and 2.) they are vertically positionable in
18 a vertical axis to desired vertical slot positions by suitable vertical motion-control means such as
19 a motion-controlled lead screw 60 which extends downward from the end of arm 70 (vertical
20 length and travel subject to unit-rack height). Following the positioning of the pick-and-place
21 means 18 to an alignment with merchandise in a merchandise slot, an electro-mechanically
22 actuated gripping means is employed to grip the merchandise and move in an axis aligned with
23 the slot until the merchandise is removed therefrom (this step is reversed for placing merchandise
24 into a slot). The gripping means is also used when goods are delivered to a workstation, whereby
25 the merchandise is gripped and aligned with a workstation delivery chute where it is released to
26 slide down an incline to a merchandise reception bin accessible to the ordering customer (not
27 shown). It is noted that the support and positioning of the pick-and-place unit(s) can be further
28 enhanced by, suspension from above, or support from below, of an auxiliary rail system (e.g. one
29 or more motion-controlled element supported by rollers gliding in an aligned rail system 62). In
30 either case, the light intensity sensing means 22 located adjacent to pick-and-place means
31 provide real-time inventorying or regular computer-audited inventorying of the entire stock of

1 goods as the pick-and-place means is moved. For example, during a regularly scheduled
2 inventory such as every hour, or every shift, the computer motion control actuation of the robotic
3 arm(s) 70 radially sweeps the sensing means 22 across each of the cumulative slots 58 of each
4 horizontal height-row. It then vertically moves to subsequent horizontal height-rows to sweep
5 their respective slots until the entire height of the stock has been swept/scanned. Thus, a
6 computer-audited inventory of over forty thousand units is accomplished in less than a few
7 minutes, upon demand or as scheduled. During normal pick-and-place activity the sensing means
8 22 can also be employed to verify slot occupancies and vacancies. In either case--whether
9 scheduled, or during normal operation--databased information pertaining to the inventoried
10 goods 18 is thereby updated, such that remote orders from a consumer's home or place of
11 business, and local ordering (from the facility's workstations), ensures an item will always be on
12 hand when it is shown to be among the current stock available, and can optionally be
13 immediately ordered (for example, Just-In-Time 'JIT') from a supplier source when the stock is
14 depleted, pre-sold (with a scheduled delay until the availability of the order), or reaches a
15 particular unit-count threshold.

16 Additionally, the inventorying means can be configured to provide data to the facility's
17 networked device 14 that arranges inventory information in a readily understandable manner for
18 quick and easier analysis of the inventory. For example, stock that is moving the quickest among
19 the inventoried columns and rows can be represented pictorially on a computer display screen in
20 unit slots that are colored in hot colors (e.g. white, yellow, orange, red). Conversely, slow-
21 moving inventory can be represented in cool colors (blue, green, gray, black). Additionally, such
22 data can be cross-referenced or exportable to a spreadsheet format for numerical representations,
23 and for coordinated ordering or re-ordering of additional inventory. Either approach, whether
24 graphical or numerical, can be further parsed to show 'aging' of stock i.e. stock that has been
25 retained in the inventory over extended periods of time and may be removed for replacement
26 with newer inventory.

27 The automated system of the optimized networked-venue illustrates, by way of example,
28 fourteen workstations and three additional ATM-style external workstations, all of which, in
29 effect, function as order-taking and order-fulfilling stations, meaning that the facility is
30 optimized for the scheduling and serving of no less than seventeen customers at a time--who can

1 quickly and easily browse on-screen represented goods, and retrieve on-screen selected goods by
2 the system's internal robotics as desired. In contrast, a conventional entertainment-media retail
3 and or rental facility would have to have a staff of no less than seventeen employees and
4 seventeen cash registers to serve an equal number of customers simultaneously, and all of the
5 stock in a conventional store would have to be secured by expensive security equipment and
6 would have to first be hunted for by the customers (assuming desired goods are in stock).
7 Furthermore, the condensing of the stock into the interior of the facility permits the number of
8 goods to be securely stored within an optimized area that is one fifth of the real estate required
9 for a conventional store having the same volume of stock. Thus, a substantial reduction in
10 overhead is achieved by optimized networked-venues (e.g. in real estate, personnel/staffing,
11 security staffing, inventorying, ordering, etc.). The thirty foot inner diameter optionally permits
12 the inclusion of entertainment-content replication equipment therein, and MP3 audio file
13 downloading systems (the system uploads ordered medialess MP3 files or other digital audio file
14 format to medialess-file ordering customers) as network bandwidth speeds increase and
15 medialess audio files sales increase.

16 FIG. 3 further illustrates the employment of a ring of projectors 42 that are positioned to
17 project panoramic, or segmented, imagery on a screen 40 (see also FIG. 2). The content of such
18 imagery comprises any one or more in a variety of visual-content media suitable for projection of
19 panoramic, or segmented, images onto a projection screen. The screen further secludes the
20 facility's inventory and provides an engaging and dynamic 'storefront' that is always changing--
21 versus the static appearance of conventional stores. When the workstations include cameras one
22 or more projectors 42 can project workstation customers on the screen to promote customer
23 interactivity at one or more venue having the networked-workstation system. Screen also ideally
24 suited for displaying store promotions and contests, including interactive contests between
25 customers and/or stores.

26 In a co-pending patent by the applicant of the present invention, various screen types and
27 image exhibition equipment are described that are suitable for employment as the facility's
28 screen 40.

1 Although the present invention has been described with a certain degree of
2 particularity, it is understood that the present disclosure has been made by way of example, and
3 changes in detail or structure may be made without departing from the spirit of the invention in
4 the previous descriptions or as defined in the appended claims.

CLAIMS

Claim 1. Apparatus and software for establishing a bi-directional communication link between at least one customer and a large publicly accessible communications network such as the Internet, and for providing an online dual-commerce system, comprising:

a.) a browser device having network-browsing software

b.) network connection means

c.) network-user identification and verification means

d.) at least one networked computer, software and user interface representing at least one networked-venue, said computer and software of a type which provides a current databased selection of available online-choices and available networked-venue-choices of goods, or services, or activities, or combinations thereof,

e.) software and user interface suitable for

i. providing communications with said networked computer(s), and for taking, recording, and reporting customer orders from choices provided by said current databased selection

ii. making at least one order from said available online-choices

iii. making at least one order from said available networked-venue choices whereby said order(s)

is scheduled and reserved according to a current condition of a chronological table of scheduled and available customer-events;

is downloadable in the form of an itinerary by said customer; and

is subsequently culminated following the scheduled arrival of the ordering customer at a physical location of said networked-venue(s) that is designated for expedited service, following the verification of the customer's identification and order by suitable identification and order verification means located at the physical location(s)

iv. automated database-condition editing, monitoring and reporting which,

is responsive to changes to said current databased selection when each online order is made, and when each online scheduled and reserved venue-order is made and subsequently culminated from said networked-venue(s); and which,

causes record-keeping and record-updating software routines to automatically record transaction details pertaining to said online order(s) and said scheduled and reserved order(s) and to update and report the availability of subsequent orderings, schedulings, and reservations to said current databased selection when any order is completed.

Claim 2. The browser device of claim 1 consisting of a handheld apparatus having wireless bi-directional connectivity to the Internet.

Claim 3. The browser device of claim 1 consisting of a computer and a modem.

Claim 4. The network browsing software of claim 1 consisting of a commercially available browser application.

Claim 5. The network browsing software of claim 1 consisting in the combination of a commercially available browser application and an Internet portal.

Claim 6. Said user interface of claim 1 wherein said interface comprises an Internet portal.

Claim 7. The network connection means of claim 1 consisting of an Internet connection made by an Internet Service Provider.

Claim 8. The identification and order verification means of claim 1 consisting of at least one commercially available customer identification and verification apparatus suitable for communication with said networked-computer.

Claim 9. The user interface and software suitable for establishing a communication link with said networked computer(s) of claim 1, further comprising at least one software routine for providing a customer with a printout record.

1 Claim 10. The ordering means of claim 1 further comprising at least one software routine for
2 automatically providing a networked-venue merchant with transaction details pertaining to his
3 venue's sales.

4
5 Claim 11. The ordering, scheduling and reservation means of claim 1 further comprising at least
6 one software routine for automatically providing a networked-venue merchant with transaction
7 details pertaining to schedulings and reservations.

8
9 Claim 12. The record-keeping and record-updating software of claim 1, further comprising at
10 least one software routine for automatically providing a supplier of a networked-venue with
11 transaction details pertaining to that venue's sales.

12
13 Claim 13. The record-keeping and record-updating software of claim 1, further comprising at
14 least one software routine for automatically calculating and deducting a sales commission based
15 on the type of online order made.

16
17 Claim 14. The ordering means of claim 1 further comprising at least one software routine for
18 facilitating the delivery of online order(s) of goods to a customer.

19
20 Claim 15. The networked-venue and networked computer and software of claim 1 further
21 comprising software routines for the confirmation of customer orders.

22
23 Claim 17. The networked-venue and networked computer and software of claim 1 further
24 comprising software routines for the verification of customer identification.

25
26 Claim 18. The customer identification software of claim 17 further consisting of at least one
27 commercially available networkable customer identification and verification apparatus.

28 Claim 19. The browser device of claim 1 consisting of at least one networked computer located
29 at a physical networked-venue.

1 Claim 20. The browser device of claim 1 consisting of at least one networked computer located
2 at a facility which also incorporates a plurality of physical networked-venues.

4 Claim 21. The dual-commerce apparatus of claim 1 further comprising software routines for
5 entering and recording financial transaction card information and for reporting transactions to at
6 least one financial transaction card vendor.

8 Claim 22. The browser device of claim 1 consisting of at least one networked computer located
9 at a physical networked-venue, said computer having a user interface that is similar in
10 appearance and offers functionality similar to, an Automated Teller Machine (ATM) including
11 means for reading, recording and reporting financial transaction card information.

13 Claim 23. The networked-venue of claim 1 further comprising a secured retail-inventory
14 environment wherein networked workstations are arranged to secure an inventory of
15 merchandise in an optimized workstation system such that said inventory is consolidated in a
16 space-saving manner and is out of reach to customers until purchased, and wherein each of said
17 workstations:

- 18 a.) comprises a networked computer having connectivity to at least one network, and
19 has a user interface to facilitate transactions and interactions,
- 20 b.) has networked order-taking apparatus and software routines to facilitate user
21 financial transactions and for reporting and recording said transactions,
- 22 c.) has record-keeping and record-updating software routines to automatically record
23 transaction details pertaining to any workstation order and to update and report
24 the availability of merchandise, according to the order(s) made.

26 Claim 24. The optimized networked workstation system of claim 23 further comprising an
27 automated merchandise pick-and-place system for secured retail inventory comprising:

- 28 a.) at least one motion-control computer with motion-control software that is
29 networked to the workstation system
- 30 b.) a multiplicity of securely located merchandise slots that are vertically aligned in
31 columns and horizontally aligned in rows

- c.) at least one computer-accessible record of the vertical position and horizontal position of each said merchandise slots
 - d.) at least one updateable computer-accessible record of the vertical position and horizontal position of of said merchandise slots and the type of merchandise stored therein
 - e.) at least one computer-accessible record of the vertical position and horizontal position of a receiving end of each workstation delivery chute located adjacent to each workstation
 - f.) a motion controller interface coupled between said motion-control computer(s) and electro-mechanical actuators
 - g.) at least one motion-controllable member that is positionable by said actuator(s) in a horizontal axis having a pick-and-place robotic apparatus operative from an end thereof that is positionable in a vertical axis by said actuator(s)
 - h.) an electro-mechanically actuated merchandise gripping means that is positionable to securely grip merchandise and move it in and out of any merchandise slot and to also move it into a receiving end of any workstation delivery chute
- the combination of which is responsive to user input with, and control signals from, at least one computer that is networked to the workstation system to provide:
- i. stocking, retrieval and re-stocking of merchandise; and
 - ii. automated delivery of said merchandise to a user's workstation chute by accessing at least one of said computer-storable record and communicating the record data to said motion-control computer for the computer-controlled positioning of said member(s), said pick-and-place robotic apparatus, and said gripping means
 - iii. merchant input from a networked computer for automated pick-and-place control of inventory.

Claim 25. The automated merchandise pick-and-place system for secured retail inventory of claim 24 further comprising rapid inventorying apparatus comprising at least one emitter-detector light sensing means that is positionable by computer motion-control to sweep in a controlled path past merchandise slots and interpret the difference in light reflectivity of vacant

1 container slots and container slots occupied with merchandise, and rapidly scans slot-empty
2 states or slot-occupied states and records, maintains and reports all state-conditions of the
3 inventory to said record-keeping and record-updating software.
4

5 Claim 26. The networked-venue of claim 1 further comprising a secured entertainment-content
6 replication environment and retail-inventory wherein networked workstations are arranged to
7 secure entertainment-content replication equipment and an inventory of merchandise in an
8 optimized workstation system such that said equipment and the product of thereof, and said
9 inventory, is consolidated in a space-saving manner and is out of reach to customers until
10 purchased, and wherein each of said workstations:

- 11 a.) comprises a networked-computer having connectivity to at least one network, and
12 has a user interface to facilitate transactions and interactions,
- 13 b.) has networked order-taking apparatus and software routines to facilitate user
14 ordering and financial transactions pertaining to said product and said inventory
15 and for reporting and recording said transactions,
- 16 c.) has record-keeping and record-updating software routines to automatically record
17 transaction details pertaining to any workstation order and to update and report
18 the availability of merchandise, according to the order(s) made.

19
20 Claim 27. The workstation system of claim 23 further comprising at least one ATM style
21 workstation which adjoins an exterior wall of the networked-venue and provides workstation
22 functionality.
23

24 Claim 28. The workstation system of claim 23 wherein each of said workstations has hi-speed
25 connectivity and provides interactivity with the workstations of at least one other workstation
26 system.
27

28 Claim 29. The customer ordering means of claim 1 further comprising multimedia-playback
29 software routines and at least one type of multimedia content for facilitating customer
30 transactions with the playback of said multimedia content.
31

1 Claim 30. The customer ordering means of claim 29 wherein the multimedia-playback means
2 features multimedia content having meaning that is relevant to the context of customer
3 transactions and interactions, and is synchronous thereto, and helps to facilitate order decisions.
4

5 Claim 31. The apparatus and software of claim 1 wherein said at least one computer consists of
6 at least one networked server computer and software having a communication link with at least
7 one client computer and software.
8

9 Claim 32. The dual-commerce system of claim 1 wherein said physical location of said
10 networked-venue(s) designated for expedited service, is schedulable up to 100% flow rate of
11 scheduled customers.
12

13 Claim 32. The dual-commerce system of claim 1 wherein said physical location of said
14 networked-venue(s) designated for expedited service, is scalable to accommodate increased
15 scheduled customer flow rates.
16

17 Claim 33. The optimized networked workstation system of claim 23 wherein each of said
18 workstations provide software and hardware means for browsing, previewing, ordering,
19 uploading, and keeping a computer-accessible record of order transaction details pertaining to
20 orders for, and uploadings of, medialess digitally-recorded entertainment-content such as MP3
21 (Mpeg 3) files that are ordered and received by customers having networked communication
22 with said system.
23

24 Claim 34. The networked communication of claim 33 consisting in bi-directional communication
25 between said workstation(s) and at least one wireless handheld device suitable for receiving
26 digitally-recorded files.
27

28 Claim 35. The networked communication of claim 33 consisting in bi-directional communication
29 between said workstation(s) and at least one coupled handheld device suitable for receiving
30 digitally-recorded files.
31

1 Claim 36. The customer identification and order verification means of the networked-venue(s) of
2 claim 1 further comprising bi-directional communication link with at least one wireless handheld
3 device.

4
5 Claim 37. The apparatus and software of claim 1 further consisting of means for a customer
6 download said itinerary to a wireless device.

7
8 Claim 38. A dual-commerce method enabling a customer to place online orders over a network
9 such as the Internet including orders that are schedulable and reserveable and provide a customer
10 scheduled excursion to at least one networked-venue which offers deliverables that the customer
11 has ordered online, comprising the steps of:

- 12 a.) establishing a bi-directional communication link between a customer browsing device
13 and a large publicly accessible communications network such as the Internet, and at
14 least one dual-commerce networked-venue represented at an Internet portal site
- 15 b.) accessing a current databased selection of available online-choices, and available
16 networked-venue-choices of goods, or services, or activities, or combinations thereof,
17 available to the customer(s) both online and from at least one physical location of said
18 networked-venue(s)
- 19 c.) establishing a communication link with at least one networked computer(s) at said
20 networked-venue(s)
- 21 d.) accessing software and user interface for making choices pertaining to said current
22 databased selection and for making at least one order from said choices online
- 23 e.) accessing customer ordering, reservation and scheduling means for making choices
24 pertaining to said current databased selection and for making and recording at least
25 one order from said choices online which is schedulable and reserveable according to
26 a current condition of a chronological table of scheduled and available customer-
27 events
- 28 f.) making at least one networked-venue order online, downloading an itinerary which
29 when followed subsequently completes the order with the scheduled arrival and
30 interaction of the customer at said physical location of said networked-venue(s) that is
31 designated for expedited service, following the verification of the customer's

1 identification and order by suitable identification and order verification means located
2 at the physical location

3 g.) automatically updating current databased selection when each online order is made,
4 and when each reserved and scheduled order is made and subsequently culminated
5 from said networked-venue(s), and causing record-keeping and record-updating
6 software routines to automatically record transaction details pertaining to said online
7 order(s) and said scheduled and reserved order(s) and to update and report the
8 availability of subsequent orderings, schedulings and reservations to said current
9 databased selection when any order is completed.

10
11 Claim 39. Dual-commerce system for establishing a bi-directional communication link between
12 at least one customer and a large publicly accessible communications network such as the
13 Internet, comprising:

14 a.) a browser device having network-browsing software

15 b.) network connection means

16 c.) network-customer identification and verification means

17 d.) at least one dual-commerce networked-venue represented by at least one networked
18 computer and software, said computer and software of a type which provides a current databased
19 selection of available merchandise, or services, or activities, or combinations thereof, available to
20 said customer(s) both online and from at least one physical location of said networked-venue(s)

21 e.) software and user interface suitable for

22 i. providing communications with said networked computer(s), and for taking,
23 recording, and reporting customer orders from choices provided by said current
24 databased selection

25 ii. making at least one order from said available online-choices

26 iii. making at least one order from said available networked-venue choices whereby
27 said order(s)

28 is scheduled and reserved according to a current condition of a chronological table
29 of scheduled and available customer-events;

30 is downloadable in the form of an itinerary by said customer; and

1 is subsequently culminated following the scheduled arrival of the ordering
2 customer at a physical location of said networked-venue(s), following the
3 verification of the customer's identification and order by suitable identification
4 and order verification means located at the physical location(s)
5 iv. automated database-condition editing, monitoring and reporting which,
6 is responsive to changes to said current databased selection when each online
7 order is made, and when each online scheduled and reserved venue-order is made
8 and subsequently culminated from said networked-venue(s); and which,
9 causes record-keeping and record-updating software routines to automatically
10 record transaction details pertaining to said online order(s) and said scheduled and
11 reserved order(s) and to update and report the availability of subsequent
12 orderings, schedulings, and reservations to said current databased selection when
13 any order is completed.

ABSTRACT

Means for establishing a bi-directional communication link between at least one customer and a large publicly accessible communications network such as the Internet and providing dual-commerce ordering, reservation and scheduling system. The system comprises one or more browser device; network connection means; network-user identification and verification means; browsing/interface means such as a portal or other Internet site; and, at least one dual-commerce networked-venue. The system's computer and software provides a current databased selection of available merchandise, or services, or activities, or combinations thereof. The online databased selection represented to the customers are available online and from a physical location of at least one networked-venue(s). The system has a user interface and software that provides communication with the networked computer(s) at one or more networked-venue, and for representing customer ordering means pertaining to the current databased selection and for making at least one order from the choices offered online. Online orders of deliverables retrievable at networked-venues, are schedulable and reserveable and downloadable to customers in the form of an itinerary of sequenced customer-events, and such orders are subsequently culminated and reported to the system following: the scheduled arrival of the ordering customer at the physical location of networked-venue(s) and verification of the customer's identification by identification verification apparatus located at the physical location. Record-keeping and record-updating software routines automatically record transaction details pertaining to online order(s), and scheduled/reserved order(s), and update and report the availability of subsequent orderings, schedulings and reservations to the current databased selection according to the order(s) made.

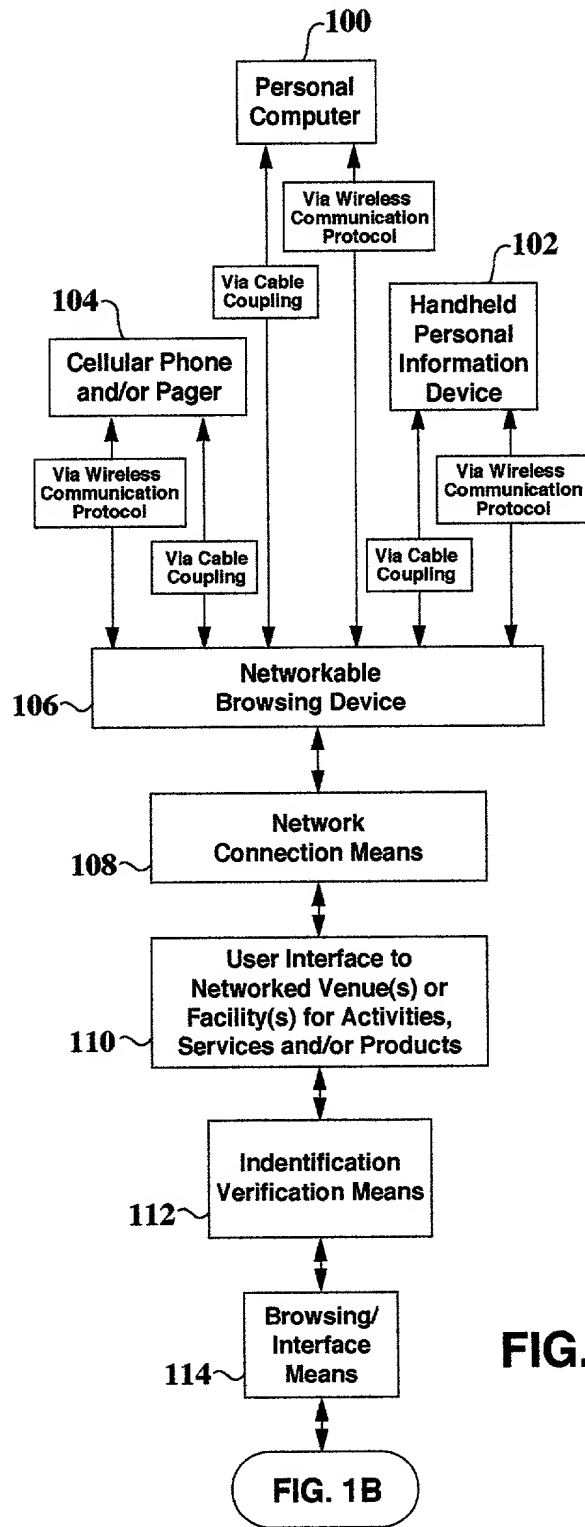


FIG. 1A

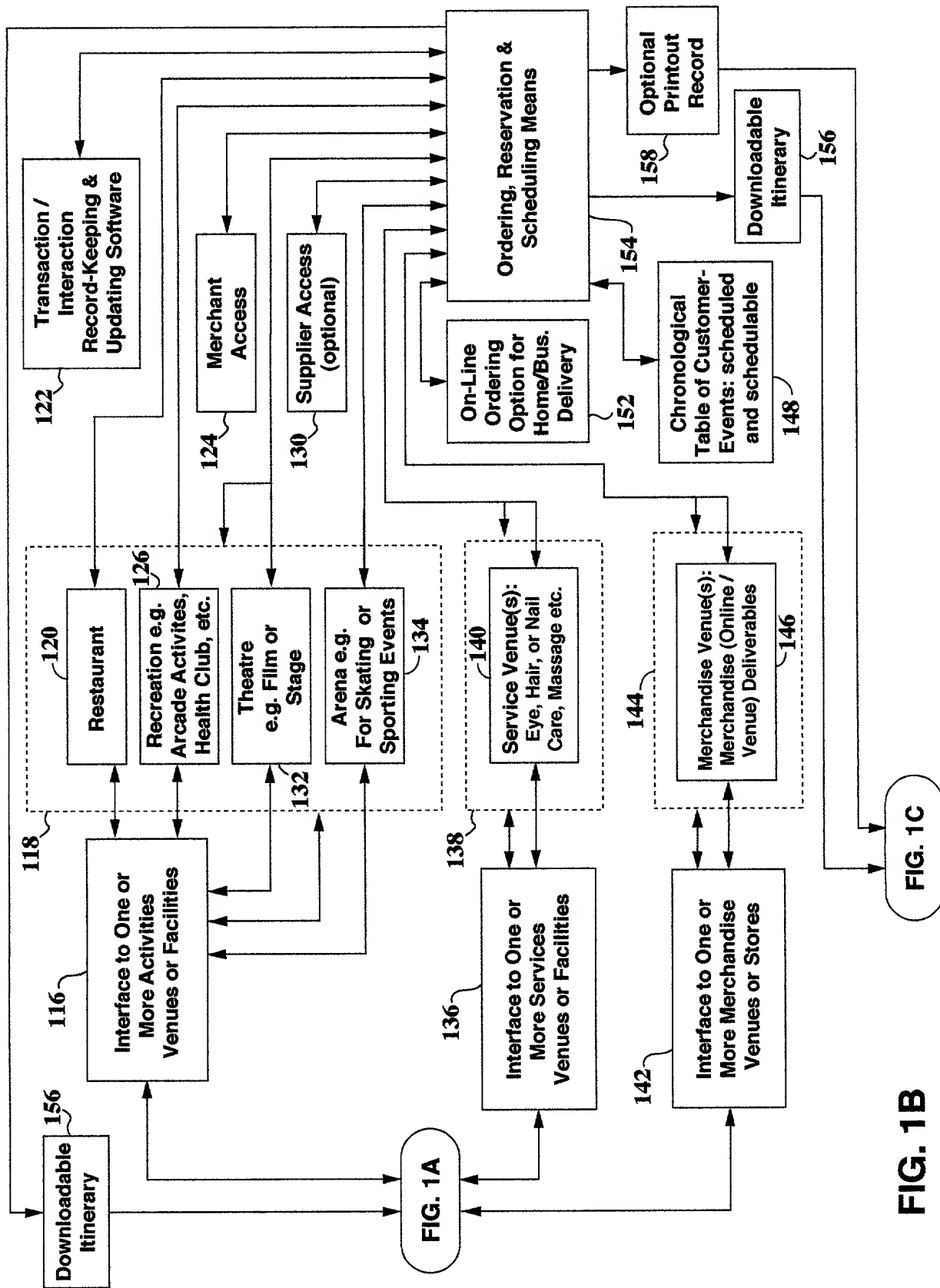
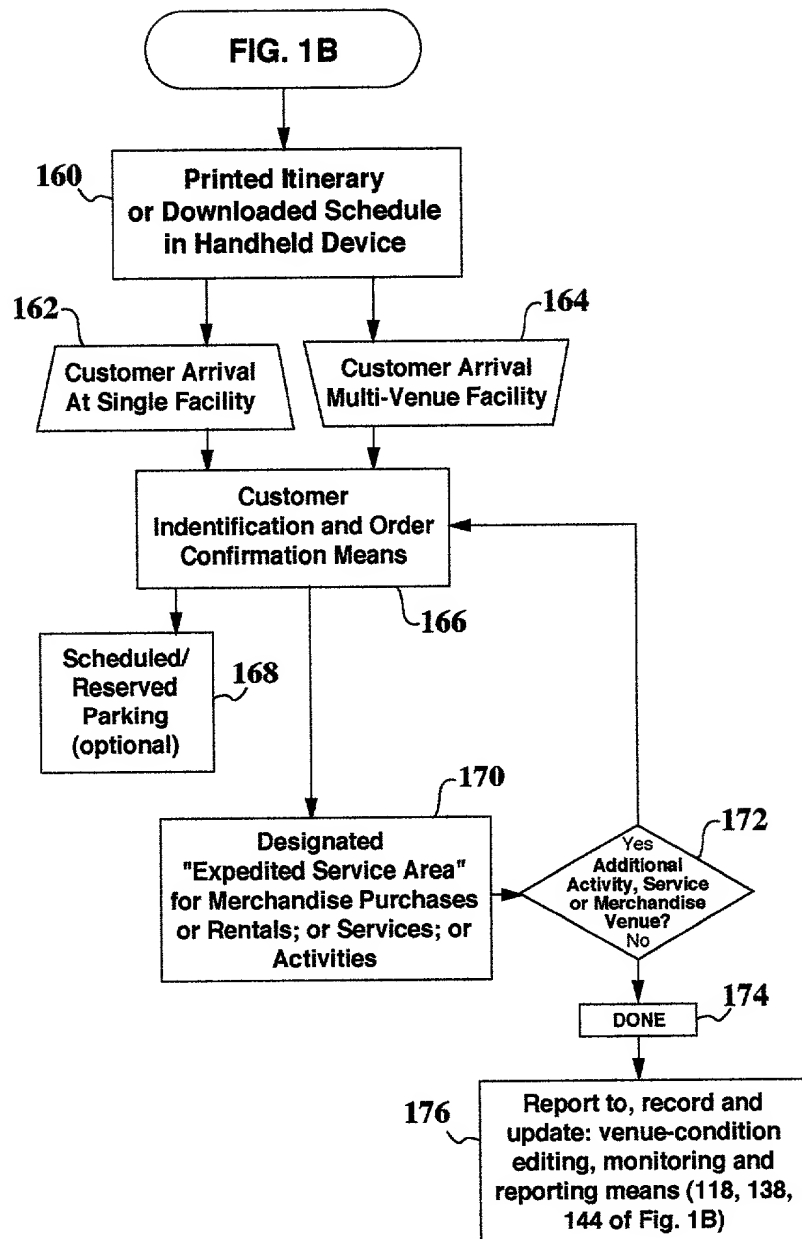


FIG. 1B

FIG. 1C

**FIG. 1C**

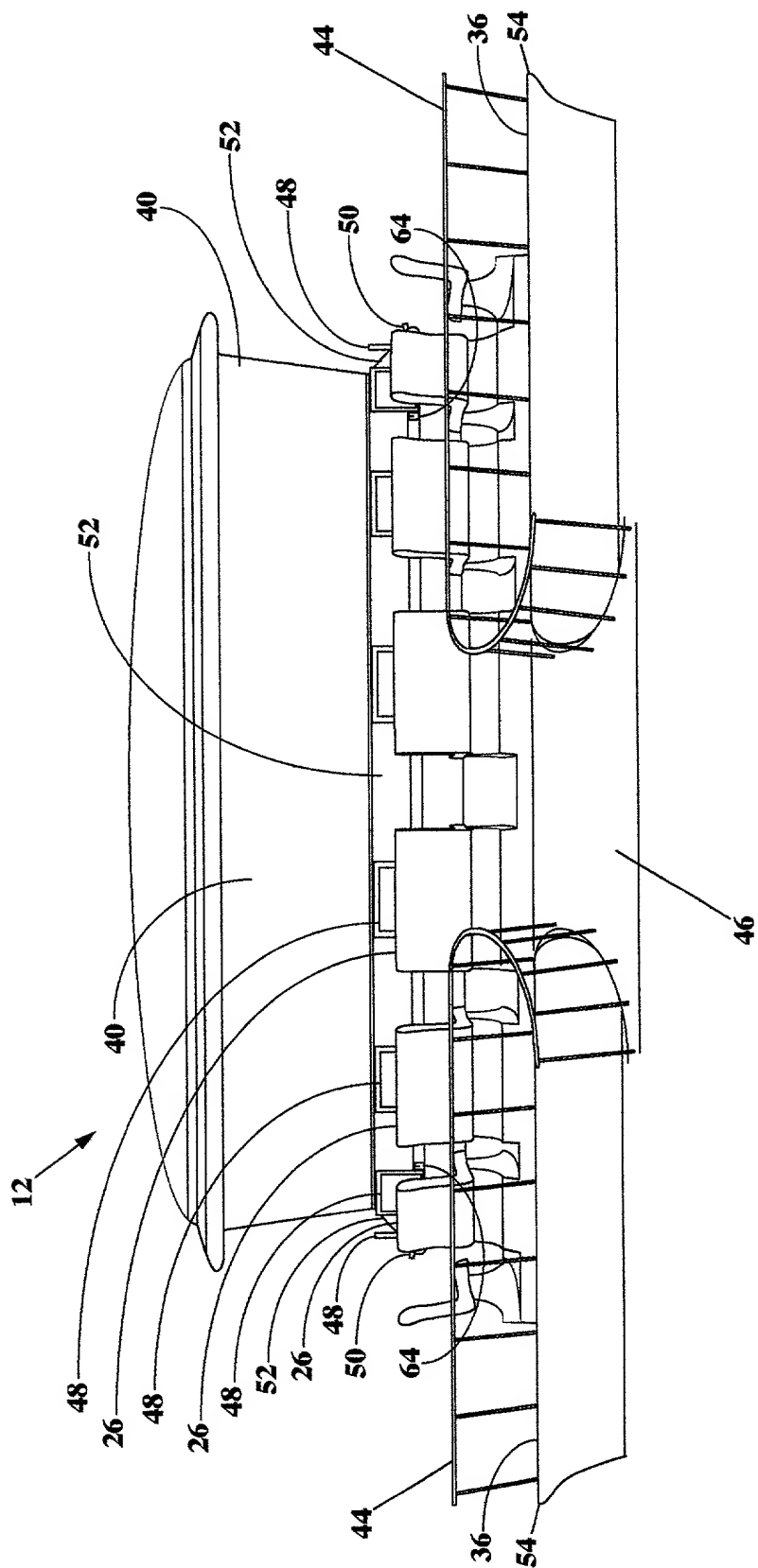


FIG. 2



FIG. 3

DECLARATION - ORIGINAL APPLICATION

ATTORNEY'S DOCKET NO.

As a below-named inventor, I hereby declare that:

my residence, post office address and citizenship are as stated below next to my name;

I verily believe I am the original, first and sole inventor (if only one name is listed below at 201) or a joint inventor (if plural

inventors are named below at 201-203) of the invention entitled ORDERING, Scheduling andRESERVATION System For Expedited Commerce BETWEEN AN INTERNET BROWSING
which is described and claimed in the attached specification; APPARATUS AND ONE OR MORE PHYSICAL VEHICLES

I do not know and do not believe that the invention was ever known or used in the United States of America before my or our invention thereof;

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application;

I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application;

I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application; the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application; and

as to applications for patents or inventor's certificate on the invention filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns,

☒ no such applications have been filed, or☐ such applications have been filed as follows:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS PRIOR TO THIS APPLICATION

COUNTRY	APPLICATION NO.	DATE OF FILING (DAY, MO., YR.)	DATE OF ISSUE (DAY, MO., YR.)	PRIORITY CLAIMED UNDER 35 USC 119
				YES <input type="checkbox"/> NO <input type="checkbox"/>
				YES <input type="checkbox"/> NO <input type="checkbox"/>

ALL FOREIGN APPLICATIONS, IF ANY, FILED MORE THAN 12 MONTHS PRIOR TO THIS APPLICATION

SEND CORRESPONDENCE TO:

DARRELL METCALF
905 N. OAK AVENUE
FILLMORE, CA 93015

DIRECT TELEPHONE CALLS TO:
(name and telephone number)

DARRELL METCALF
(805) 524-1747

201	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
202	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY

(continued)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201 <i>Barrell M. Hite</i>	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
DATE <i>July 17, 2000</i>	DATE	DATE

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100